1. Histogram problem:

Class A: 21.5473 27.0135 29.8611 35.4697 36.8878 38.0212 39.4082 41.1395 45.5574 49.0956 51.6582 52.6409 53.0567 53.1624 53.4761 55.8833 57.1591 63.8259 64.2501 65.4979 65.7157 69.4580 81.0208 81.5276 84.7873 85.7744 89.0037 91.1380 91.4641 93.8168 93.9471 96.0843 96.0848 100.0858 105.1627 108.3613 110.8800 117.6647 117.9848

118.4360 121.2917 125.8570 128.0077 129.2932 135.8174 139.2352 140.8043 141.4214 144.7079 144.7667

Class B: 25.6024 34.8757 35.1628 35.8968 35.9767 38.8649 41.0315 42.6889 43.8441 43.9201 44.8091 46.0837 46.5343 48.6401 48.9080 54.7670 56.1891 56.1938 58.7832 59.1863 59.2944 65.4580 70.6238 76.9717 77.2350 81.0838 82.5482 83.5704 91.7224 93.7093 94.9845 96.4818 100.3616 103.2577 105.8672 110.0303 114.5979 122.2597 125.7384 128.2570 129.0089 131.2494 132.3562 135.8940 137.9303 138.0080 143.3842 143.7339 150.0468 154.4975

Determine the classes for data samples: 55, 101, 136

2. Adaptive decision boundary and minimum squared error methods:

|  |  |  |  |
| --- | --- | --- | --- |
| X1 | X2 | X3 | d |
| 0 | 0 | 0 | 1 |
| 2 | 1 | 1 | 1 |
| 2 | -1 | 1 | 1 |
| 1 | 2 | -1 | -1 |
| 3 | 2 | 2 | -1 |
| 2 | 3 | -3 | -1 |
| 3 | -3 | 2 | -1 |